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### ABSTRACT

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A method for avoiding loops from forming when setting up label switched paths is provided. The method uses a Label Splicing Message followed by an Acknowledgment message to determine if loops are formed in the process of joining a new node or subtree to a multicast MPLS tree. By verifying that the path towards the root of the MPLS tree is loop-free during the construction of the tree, this method complements the loop detection mechanism provided by the label switched protocol (LDP).

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